

Amendments to the Claims:

This listing of claims will replace all prior versions, of claims in the present application:

Listing of Claims:

1. A computer-implemented method for encrypting and decrypting an original string that is storable in a database, the method comprising:
 - defining a set of factors to be used for encrypting the original string;
 - using an encryption equation to map the original string to an encrypted string, the encryption equation being a function of the original string and the set of factors;
 - using a set of derivative equations to generate derivative values from the set of factors;
 - storing the encrypted string and the generated derivative values in the database;
 - providing one or more false derivatives that cannot be used to determine a given factor from the set of factors;
 - additionally storing the one or more false derivative values in the database with the generated derivative values;
 - using a set of factor decryption equations to map each of the generated derivative values stored in the database to a corresponding factor in the set of factors; and
 - decrypting the encrypted string stored in the database using a decryption equation and each factor mapped through the set of factor decryption equations to

generate a decrypted string that is equal to the original string,

wherein a presence of the one or more false derivative values with the generated derivative values in the database prevents an attacker from knowing which of the one or more false derivative values and the generated derivative values to use with the factor decryption equation to derive the factors in the set of factors.

2. The method of claim 1, wherein the set of factors comprises at least one of: constant values, numbers, objects, and random values that are derived from events.

3. The method of claim 1, wherein the set of factors comprises at least one of: constant values, numbers, objects, and random values that are derived from values provided by equations.

4. The method of claim 1, wherein the set of derivative equations comprise mathematical functions that are defined in terms of the set of factors.

5. The method of claim 1, wherein a number of derivative equations in the set of derivative equations is at least equal to a number of factors in the set of factors.

6. The method of claim 1, wherein the original string is comprised of characters.

7. (Cancelled)

8. (Cancelled)

9. The method of claim 8, wherein the decryption equation is a mathematical function of the encrypted string and each of the factors mapped through the set of factor decryption equations.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. The method of claim 1, wherein defining the set of factors comprises defining at least one factor.

14. The method of claim 1, wherein the set of derivative equations comprises at least one derivative equation.

15. (Cancelled)

16. (Cancelled)

17. (Cancelled)

18. (Cancelled)

19. (Cancelled)

20. (Cancelled)